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EXAMINER

WACHTEL, ALEXIS A

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 03/12/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/554,733

Applicant(s)

MANS ET AL.

Examiner

Alexis Wachtel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### ***Detailed Action***

#### ***Specification Objections***

1. The following guidelines illustrate the preferred layout and content for patent applications. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

The following order or arrangement is preferred in framing the specification and, except for the reference to the drawings, each of the lettered items should appear in upper case, without underling or bold type, as section headings. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) Title of the Invention.
- (b) Cross-Reference to Related Applications.
- (c) Statement Regarding Federally Sponsored Research or Development.
- (d) Reference to a "Sequence Listing," a table, or a computer program listing appendix submitted on compact disc (see 37 CFR 1.52(e)(5)).
- (e) Background of the Invention.
  - 1. Field of the Invention.
  - 2. Description of the Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) Brief Summary of the Invention.
- (g) Brief Description of the Several Views of the Drawing(s).
- (h) Detailed Description of the Invention.
- (i) Claim or Claims (commencing on a separate sheet).
- (j) Abstract of the Disclosure (commencing on a separate sheet).
- (k) Drawings.
- (l) Sequence Listing, if on paper (see 37 CFR 1.821-1.825).

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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3. Claims 1-5 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. With regards to claim 1, Applicant does not clearly describe what is meant by term sponge cloth. Applicant asserts that a "sponge cloth" is different from a "sponge." US 6,129,867 to Chevalier et al discloses that it is known that the expression "sponge-cloth" means an alveolar cellulosic material with two substantially parallel faces and of small thickness, generally less than once centimeter. Such a material may comprise a reinforcing scrim in its structure (Col 1, lines 7-15). Since Applicant admits in the Specification that sponge cloths are known (Applicant's Specification, pp.1 lines 1-6). Examiner takes this admission as prior knowledge of the above disclosed "sponge-cloth" structure. For the purpose of examination said "sponge-cloth" is essentially a "sponge" that may or may not have an internal reinforcing structure.

5. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the

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claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). The rejections of claim 10 follows:

6. Claim 10 recites the broad recitation: fiber fraction is 5% to 50%, and the claim also recites 10% to 40% which is the narrower statement of the range/limitation. Said claim is thus rejected for reasons set forth above.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

11. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by WO 98/28360.

Examiner note: Article claim 1 has method limitation of "capable of" which is not necessarily given patentable weight. "Capable of" language is not a positive recitation and only requires an ability to do so. WO 98/28360 discloses a reinforced cellulosic

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sponge made via the amine oxide process wherein a foaming agent or blowing agent may be employed to assist in cell formation (Abstract). The sponge is reinforced by discontinuous fibers (pp.1, lines 23-26). The sponge was prepared from N-methyl-morpholine-N-oxide (pp.4, lines 12-13). Latex is incorporated into the sponge in order to increase the spong's tensile strength and wear resistance which meets the plasticizer limitation of claim 4 (pp.14, lines 11-14).

12. Claims 1-5, 8, 11, 12, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,129,867 to Chevalier et al.

US 6,129,867 to Chevalier et al is directed to a method of manufacturing alveolate cellulosed products and teaches that a useful production process for manufacturing a sponge includes: dissolving cellulose in an intrinsic solvent for cellulose; incorporating an effective quantity of at least one pore-forming agent into the resulting mixture, with mixing; said pore-forming agent(s) which are compatible with the cellulose mixture, being capable of generating macro and micropores when it/they is/are actuated (Col 15, lines 55-66). One of the steps includes microfibrillating the cellulosic raw material with water. This activation treatment facilitates the dissolution of the cellulose in the solvent (Col 5, lines 15-29). *Examiner note: said activating treatment introduces water into the cellulosic/solvent/pore-forming agent mixture.* Said solvent is an amine oxide such as N-Methyl morpholine N-oxide (NMMO) (Col 2, lines 32-42). With regards to claims 11 and 12, a suitable pore forming agent can be solid, in the form of particles which are actuated by fusion, sublimation or dissolution or chemical.

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decomposition. An example of a dissolving pore forming agent is sodium sulfate decahydrate (Col 7, lines 50-66). When carrying out the process of the invention, it may be desirable to incorporate pigments, bactericides, and plasticizers into the cellulosic mixture (Col 9, lines 20-40). A homogenous dough is produced which is a mixture of partially dissolved cellulose with solvents, and pore forming agents. Reinforcing fibers such as wood pulp, cotton linen ramie, sisal, hemp, jute, viscose, etc., may be added to the cellulosic raw material/solvent/pore-forming agent(s) dough (Col 8, lines 40-67).

*Examiner note: these reinforcing fibers satisfy "fiber" requirements of claim 6.* The dough can then be: poured or injected into a mold with or without compression; extruded through a die; deposited on a support such as a cloth or a scrim either by zigzag extrusion or by coating using rollers (Col 9, lines 58-67). Chevalier et al teaches that it is well known to, as well, deposit the dough on a carrier strip (Col . 1, lines 34-36).

*Examiner note: a carrier strip is taken by Examiner, to be equivalent to transport belt.*

The final step comprises a plurality of steps which cause or complete the cellulose precipitation and the dissolution of the pore forming agent. Said final step of process has to result in precipitation of a porous mass; the pores result from fusion, dissolution or chemical decomposition of the pore forming agents present. At the end of this step, the alveolar cellulosic material is produced (Col 12, lines 62-67). The resulting sponge has to be washed to eliminate all traces of chemical agents used in the process (Col 13, lines 1-4). It is also well established in the art that a sponge after initial production is then dried and plasticized before being cut and packaged (Col 1, lines 50-53). Blowing agents are defined as recognized in the art of the amine oxide process. Furthermore,

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Chevalier is silent with respect to the use of a blowing agent. Thus Applicant's limitation "without use of blowing agent" is anticipated.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,129,867 to Chevalier et al.

Chevalier et al discloses a final step of the sponge production process that generally involves treating gelled cellulosic dough under conditions in which the agent(s) present are actuated (Col 3, lines 60-65). This step will result with precipitation of a porous mass; the pores result from fusion, sublimation, dissolution or chemical decomposition of the pore forming agent present (Col 12, lines 62-67). Treatment with an aqueous saline or slightly basic solution can, like the water treatment set forth above, be aimed at precipitating the dissolved cellulose by washing the solvent with a slightly basic aqueous solution (Col 12, lines 10-25).

The above disclosure fails to teach the claimed dilute aqueous amine oxide. Examiner takes Official Notice, that NMMO can function as a base and is an art recognized equivalent to the disclosed slightly basic solution of NaOH, and on proper dilution with water could function well as said slightly basic solution in question, used to precipitate the dissolved cellulose. It would have been obvious to one of ordinary skill in



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the art at the time the invention was made to have used NMMO as the slightly basic solution in question motivated by the desire to use a well known and effective base.

Chevalier et al as set forth above fails to teach applying a mixture of cellulose dissolved in water and NMMO with at least one pore former to both sides of a polymeric net.

Though Chevalier et al does not specifically disclose whether or not the cellulosic mixture is applied to both sides of a scrim whose material is not disclosed, it would have been obvious to apply the cellulosic material to both sides of a polymeric scrim motivated by the desire to provide a *concealed* support structure made of a well known and chemically resistant material that would add to the resulting sponge's resiliency.

15. Claims 9, 10, 13, 14, 16 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,129,867 to Chevalier et al.

Chevalier et al as set forth above fails to teach the claimed percentile weight ranges of fibers used, pore former fraction, cellulose fraction, plasticizer fraction, aqueous NMMO fraction.

Though Chevalier et al fails to disclose the claimed component fractions, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have optimized the strength and stability characteristics of the resulting sponge by selecting the relative proportions of the components through the process of routine experimentation.

16. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,129,867 to Chevalier et al.

Chevalier et al discloses a final step of the sponge production process that generally involves treating gelled cellulosic dough under conditions in which the agent(s) present are actuated (Col 3, lines 60-65). This step will result with precipitation of a porous mass; the pores result from fusion, sublimation, dissolution or chemical decomposition of the pore forming agent present (Col 12, lines 62-67). Treatment with an aqueous saline or slightly basic solution can, like the water treatment set forth above, be aimed at precipitating the dissolved cellulose by washing the solvent with a slightly basic aqueous solution (Col 12, lines 10-25).

The above disclosure fails to teach the claimed dilute aqueous amine oxide. Examiner takes Official Notice, that NMMO can function as a base and is an art recognized equivalent to the disclosed slightly basic solution of NaOH, and on proper dilution with water could function well as said slightly basic solution in question, used to precipitate the dissolved cellulose. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used NMMO as the slightly basic solution in question motivated by the desire to use a well known and effective base.

### ***Conclusion***

17. The prior art of record and not relied upon is considered pertinent to Applicant's disclosure. In addition, the following references are cited for disclosing various aspects of Applicant's invention:

WO 97/23552  
WO 97/422  
EP 0712889A2

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WO 95/11261  
DE 29618058 U1  
US 6,007,750  
US 4130683  
US 2179181  
US 4145532  
US 5626810

18. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Alex Wachtel, whose number is (703)-306-0320. The Examiner can normally be reached Mondays-Fridays from 8:30am to 4:30pm.

If attempts to reach the Examiner by telephone are unsuccessful and the matter is urgent, the Examiner's supervisor, Mr. Terrel Morris, can be reached at (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



CHERYL A. JUSKA  
PRIMARY EXAMINER